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ARCHITECTURE AND ITS PLACE IN A GENERAL EDUCATION.

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ARCHITECTURE AND ITS PLACE IN A GENERAL EDUCATION

BY

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A HISTORY OF ARCHITECTURE

ON THE COMPARATIVE METHOD

For Students, Craftsmen and Amateurs

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PREFACE

THE subject matter of this booklet—the Education of the Public in Architecture—was originally contributed as a paper to the Seventh International Congress of Architects held in London in 1906 under the auspices of the Royal Institute of British Architects. It was subsequently reprinted in booklet form and has been so much appreciated that reprints have been called for from time to time. In the present issue the matter has been revised and brought up to date.

Part I deals with Architecture: An Historical Sketch.

Part II deals with Architecture: Its Place in a General Education.

The history of architecture is dealt with in my book "A History of Architecture on the Comparative Method" which aims at displaying clearly the characteristic features of each country by comparing the buildings of each period and by giving due prominence to the influences—geographical, geological, climatic, religious, social, and historical—which have contributed to the formation of particular styles, and which hitherto have not been emphasised systematically in presenting the story of architectural development. The Tree of Architecture will help the reader to realise the importance of these influences and the gradual evolution of the various styles.

The analytical and comparative method adopted enables the essentials of individual styles to be easily grasped; thus the character of Gothic is emphasised by comparison with Classic and Renaissance architecture, a similar treatment being followed throughout the book.

Each style is considered under five sections, as follows:—

SECTION 1: INFLUENCES

i. Geographical	iii. Climatic	v. Social
ii. Geological	iv. Religious	vi. Historical

SECTION 2: ARCHITECTURAL CHARACTER

SECTION 3: EXAMPLES

SECTION 4: COMPARATIVE ANALYSIS

A. Plans, or general arrangement of buildings.
B. Walls, their construction and treatment.
C. Openings, their character and shape.
D. Roofs, their treatment and development.
E. Columns, their position, structure and decoration.
F. Mouldings, their form and decoration.
G. Ornament, as applied in general to any building.

SECTION 5: REFERENCE BOOKS

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ARCHITECTURE AND ITS PLACE IN A GENERAL EDUCATION

Part I.—Architecture: An Historical Sketch.

As we glance along the perspective of past ages, we can find in the architecture of each period a lithic history which indicates conditions of existence with far greater certainty than that written by men in more perishable materials. Thus the building art reflects the history of each period, and is an index of the social and political condition of the people and of those great religious and historical events which are landmarks in the history of mankind.

Architecture, then, may be said to be the result of and inseparable from history, because the work of man in each period is before us in the mighty structures of past civilisations. By the study of architecture we learn of the conditions, hopes, fears, and the very thoughts of the peoples of bygone days as certainly as, if not more surely than, by the contemporary written chronicles, though not with the same degree of continuity. The advancement of civilisation is manifest in architecture, which presents so noble a field for the display of the grand and the beautiful, and which at the same time is so intimately connected with the esentials of life.

In creations of surpassing excellence the painter and the sculptor may display their individual genius, but it is on the great monuments of architectural taste and magnificence that the genius of a nation is unmistakably stamped. The Egyptian, the Greek, the Saracen, the Mediævalist—what a key their respective styles afford to the character and conditions of those peoples!

In prehistoric days man in his savage state required but shelter from the elements, from wild beasts and human enemies, and this he obtained by means of the natural cave, the hut of "wattle-and-daub," or the tent. No buildings remain to show us the evolutions of form which took place during the period between that far-off time and the earliest historic architecture.

Architectural history can be divided into two main groups—viz., Historical, *i.e.*, styles evolved from a parent stem and influencing other styles; and Non-historical, *i.e.*, styles developed independently and having little direct influence on other styles.

Let us consider "Historical" or European architecture, together with Egyptian and Assyrian, by which it was influenced, in its aspect as a record of the history of the nations of Europe, leaving aside the second group, which includes Indian, Chinese, Japanese, Peruvian, Mexican, and Saracenic, as these have exerted only a limited influence on European architecture.

Egypt is the first to claim our attention, and there we find, dating from about 5000 B.C., the first great attempts at permanent constructions. Appropriately is the Sphinx at Gizeh placed as a sentinel forbidding us, as it were, to know by what long stages of evolution

historic architecture came to life. Built nearly 4000 B.C., the Pyramids represent the governing idea of the Egyptian faith—viz., that immortality could be insured by the preservation of the mummy, secured in everlasting mounds of masonry of which the construction even in these days of enginering skill is a wonder to the world. We glean from the pyramids, mastabas, and rock-cut tombs the Egyptians' strong belief in a future state, the existence of a powerful priesthood, and the significance of the traditional, unchangeable, and mysterious religious rites. Herodotus informs us that the dwelling-house was regarded as a temporary lodging, the tomb being the permanent abode of the spirit. The temples, with entrances made imposing by splendid avenues of sphinxes, alike in their painted hieroglyphics, mysterious planning, and forbidding aspect, tell us of the exclusiveness of the Egyptian religion, for they were not places of worship for the people, but rather sanctuaries for the kings and priests.

These massive buildings would have been impossible without a despotic government and the forced labour of a vast and submissive population of slaves and captive foreigners, who probably received no other reward than their food.

We next turn our attention to the architecture of Western Asia, which indicates that the Assyrians and Persians were warriors to whom warlike deeds and conquest were more congenial than the erection of stupendous tomb-houses.

Temples were unnecessary, as sacrifices were conducted in the open air, but the thousands of prisoners taken in battle were employed in raising those enormous mounds or elevated platforms on which the palaces of Nineveh, Nimroud, Khorsabad, Susa, and Persepolis were constructed, a small space being reserved for those temple observatories built in receding coloured stages, from which the astrologer-priests could consult the signs of the heavens.

The architecture of the Greeks reflects each stage of their history with remarkable accuracy, rising to its fully developed artistic height after the battles of Marathon and Salamis.

The buildings of the Pelasgic and Mycenæan periods indicate the ruggedness and severity of the earlier inhabitants ; but the Hellenic period introduces us to the most refined architecture the world has ever seen, which has been a pattern to, and has exerted so great an influence on, all subsequent art, that Greece must be held to be the source of the best artistic inspiration, which corresponds with her literary pre-eminence. In a climate remarkable for the clearness of its atmosphere, and in a country rich with marble, the most beautiful and monumental of all building materials, the Greeks evolved a type of architecture whose purity of outline and perfection of proportion has never been equalled. Their religion engendered a desire to erect stately temples, and their national games and festivals gave an opportunity for the development of music, literature, and the drama, and inspired that emulation in manly sports and contests which distinguished the race. The national exultation of the Greeks when they finally defeated the Persians was accountable for the fact that all the more important temples now found in Greece were built in the fifty years which succeeded the overthrow of their enemies.

The most famous and the most perfect of these were erected during the rule of the great Athenian, Pericles (444–429 B.C.), which marked the

climax of Athenian prosperity, art, and culture. This is reflected in those world-famous structures on the Athenian Acropolis, in which the most delicate optical refinements were introduced, and the most perfect sculpture known in the history of mankind was employed in their adornment.

The principal Greek buildings are the temples, and these are in direct contrast to those of Egypt, being public as opposed to royal monuments. Instead of the high enclosing wall and mysterious halls of the priest-ridden Egyptians, we find the small naos for the statue of the god, while on the exterior is lavished all the beauty of column, entablature, sculptured metope, frieze, and pediment, brightly treated in many colours.

The open-air theatres, in which the plays of the great Athenian dramatists were produced, the palæstra, with their lecture recesses, and the stadia are the practical and material evidence of the Greek love for the drama, philosophy, and outdoor sports.

The power of Macedonia was made paramount by Philip and his son Alexander the Great, who in 334 B.C. set out on his great expedition for subduing Egypt, Persia, and Northern India. His influence on these countries and the dissemination of Hellenic civilisation in Asia are manifest in the architecture of Northern India, which is specially remarkable for its purity and for the influence it exerted on subsequent Saracenic art introduced there a thousand years later.

When in 146 B.C. Greece became a Roman province, her architecture as a national style died with her nationality, although, like her civilisation it continued for a long period to exert its influence upon Roman art.

The architecture of Rome then succeeded that of Greece, as did also her civilisation, and we pass from a simple, trabeated style to a complex type of arch, vault, and beam. The architecture of the Romans was largely influenced by the older Etruscan art, so that in Roman architecture we find the blending of the beam of the Greeks with the arch of the Etruscans. The character and history of the Romans is well shown in the variety and monumental nature of their buildings.

Temples were still erected, but of a different type from those of the Greeks, and were used as much for the protection of accumulated Greek spoils as for worship. In addition to the stately temples, finished and adorned with the finest sculptures, we now find buildings of more complex planning and construction designed for many purposes. Stately palaces laid out on an immense scale tell us of the magnificence and luxury of the Roman court, while the superbly decorated private houses of Rome and Pompeii indicate the important character of the "patria potestas"—the basis of Roman law. The Roman love of justice is also materialised in their numerous basilicas or courts of law, while their theatres indicate quite a different idea of the drama and its representation from that of the Greeks. The amphitheatres and the circuses were the natural results of that love for brutal sports between men and wild beasts, and that coarseness yet boldness of character which enabled the Romans to bring the whole of the then known world under their domination ; while the great thermæ of the later empire are evidences of the indolence and love of luxury which led to the final decline and fall of the empire. The conquering legionaries of Rome were utilised during the periods of peace as unskilled workmen in the formation of the Great Roman roads, which, along with the triumphal

arches, are to be met with in various parts of Europe, forming the permanent expression of Roman power and dominion.

Further, by the universal use of the newly invented material, concrete, and by the employment of the arch, vault, and dome, the original architecture of imperial Rome was reproduced in all parts of the empire. Thus the Roman style of building, ever the faithful mirror of Roman civilisation, became the foundation of all later European architecture.

The most magnificent period of Roman art synchronised with the Augustan age of literature, and it was the boast of Augustus that he had found Rome of brick, but would leave it of marble.

The decline of the Roman Empire, which was accelerated by the life of ease and luxury led by the Romans, is amply illustrated in their later architecture, which is often over-decorated and coarse in detail.

But a climax was at hand, and with the fall of the Roman Empire came the end of a great chapter in architecture and civilisation.

The new force in the world's history was Christianity, and, as all roads led to Rome, the very highways which formed the connecting links of the empire could be used for the propagation of the new faith. The new religion resulted in the construction of over thirty churches of the basilican type in Rome alone. This form of building was preferred by the early Christians for reasons too numerous even to touch upon here. These churches, by the retention of pagan Roman architectural features and arrangements, modified by degrees to meet the requirements of the new religion, clearly indicate that early Christian architecture was slow in developing. An impetus was given to architecture by the transference of the capital from Rome to Byzantium (Constantinople), resulting in a new style known as Byzantine. Away from the influence of " Old Rome," the architecture of " New Rome " developed features which were undoubtedly of Eastern origin, although carried out largely by Greek craftsmen, and of these the dome on pendentives was the most important. This style reached its culmination in Sta. Sophia, Constantinople, and became the official architecture of the Eastern or Greek Church, which, like the orthodox faith it represents, has remained strangely conservative even to the present time.

Not so the architectural development in Western Europe outside Italy. Here during the Dark Ages architecture was dormant, and from the break-up of the Western Empire till the time of Charlemagne, in the eighth century, building was at a standstill. Charlemagne, however, in a great measure restored the arts to Western Europe, and his magnificent tomb-house at Aix-la-Chapelle is one of the finest examples of the period. The rise and cohesion of the Gothic nations was a matter of time, but the changes and progress of the Roman Church throughout the mediæval period were faithfully expressed in the great monastic establishments erected.

Till the Western European nations could get out of leading-strings they looked to Rome, and during the tenth, eleventh, and twelfth centuries, cathedrals and churches were erected throughout Europe, bearing distinct resemblance to the later Roman architecture, although carried out by the new nations which had been spreading over Europe from the north and east, and the style is known to us as Romanesque. This is exceedingly interesting, for it shows how far-reaching was the Roman civilisation. The Romans themselves, however, were eventually driven back by the Goths into their native country, and as time

went on the nations of Western Europe developed their own styles. The formation of the European States, and the religious enthusiasm of the period manifested in the Crusades, were most important factors in giving the necessary impetus to the introduction of that type of architecture known as Gothic.

The architecture of the Middle Ages was an evolution from the Romanesque style, and was an architecture of stone in small pieces, corresponding with the disintegrated state of Europe, and symbolising, as it were, the breaking up of the Roman Empire into small independent States.

The Gothic masons heaped up their small stones in towers that rose on open archways through the lofty roofs which covered the nave and transepts, and, pointing heavenward, tapered away in lofty spires, embroidered in a fretwork of elaborate tracery.

The prominence of the clergy, consequent upon their learning and the wealth and power of the monastic orders, caused the Church to be the one great avenue for advancement in the Middle Ages, and this, aided by the religious fervour of the times, was responsible for the great outburst of church building at the commencement of the thirteenth century. Hence the pointed-arch architecture of the thirteenth, fourteenth, and fifteenth centuries in Europe was in great measure ecclesiastical, and was used in the construction of an immense number of important cathedrals, to say nothing of innumerable parish churches. Throughout this period, although militarism was an important factor in the social *régime*, the builder's art caused the employment of a large section of the community, while the Church was the chief profession. The historic development is shown very clearly in these Gothic churches. The *priest* is reflected in the plain and somewhat ascetic character of the Early English or thirteenth-century style, the *noble* in the more florid treatment of the Decorated period, and the *merchant* in the matter-of-fact yet occasionally showy appearance of the Perpendicular or fifteenth-century style—characteristics which were surprisingly similar in all the countries of Europe.

Gothic cathedrals are very faithful exponents of mediæval civilisation and Church history. Their place in the national life was all-important, for, in the absence of printed matter, they formed the history-books of the period, the beautiful sculptures and stained-glass windows reflecting incidents of Bible history from the Creation to the Redemption. They took the place now occupied by schools, free libraries, museums, and picture-galleries. Here also is to be found the grand chronicle of secular history, in which kings and nobles, knights and commoners are represented. The worship of relics, of local saints (as St. Thomas at Canterbury), the periodical pilgrimages, the introduction of Mariolatry, the necessity of aisles for processional purposes, the introduction of chantry chapels for masses for the dead, and other changes of ritual, had their influence on church plans and ornamentation.

The great size and beauty of the mediæval cathedrals were largely due to the concentration of the artistic energy of the period on these works, instead of its being employed, as nowadays, on various buildings.

Militarism, on the other hand, is expressed in the fortified and frowning castles of the nobles, which form an eloquent though silent testimony to the feudal system of the mediæval period, as also to the comparatively unsettled condition of Europe.

Gothic architecture closed with the mediæval period at the commencement of the fifteenth century in Italy, and of the sixteenth century in the rest of Europe. It had, like the mediæval civilisation which accompanied it, run its course, and was overturned by a succession of historical events which in the succeeding centuries were to alter the face of Europe.

We can, by a retrospective view, see the influences which slowly paved the way for that great upheaval in literature and art known to us as the "Renaissance," which, aided by enthusiasm for the newly discovered classical buildings which had been buried for centuries, caused a desire for the revival of old Roman architectural forms and ornamentation.

As may be readily understood, the return to classic ideals naturally commenced in Italy, where the Gothic art had never been adopted to such an extent as in Northern Europe. The first town to be affected by the revival was Florence, due in large measure to its commercial prosperity and the enlightenment of the Medici family. The way was paved by the writings of Dante, Petrarch, Boccaccio, and, later still, by Erasmus, who helped to crystallise the revolt against mediæval thought and art. This revolt was also aided by the newly discovered MSS. of Greek and Latin authors, of which the books of architecture by Vitruvius, who lived in the time of Augustus, were most important. Other events, such as the invention of printing, which aided the spirit of inquiry and the diffusion of thought ; the discovery of gunpowder, which changed the whole method of warfare ; and the mariner's compass, which led to the discovery of the New World, were important factors in the propagation of that freedom of thought and action characteristic of the period. The influx of Greek scholars and artists to Europe, consequent upon the capture of Constantinople by the Turks in 1453, has an important influence in an age ripe for an intellectual change, and in which it became, for a time, the fashion to talk in Latin—an evidence of the close connection between the architecture and literature of this period.

All these influences might have been futile if it had not been for the work and influence of such artists as Della Robbia, Ghiberti, Brunelleschi, Alberti, Donatello, Bramante, Peruzzi, Sangallo, Raphael, Vignola, Michael Angelo, Sansovino, the Lombardi, Palladio, and a host of others. Vasari, in his lives of different architects and artists, shows the personal influence exercised by them on the arts and crafts of the Renaissance period. The character of the architecture, as represented in the new churches and palaces, faithfully reflects all these great changes in favour of the ancient Roman traditions by the banishment of the Gothic pointed arch, intersecting vault and vertical features, and the employment in a modified form of the Roman orders of architecture, applied to buildings covered by the Roman circular dome supported on a square base by means of the Byzantine pendentive.

This wave of Roman rejuvenation was felt in France, England, the Netherlands, Germany and Spain, though the effect in each country was delayed by the distance from the fountain-head, and was influenced by various internal social and political events.

In France, rich with splendid piles of Gothic architecture, the new style did not entirely displace the old, but was grafted upon it in a most delightful and picturesque fashion. It was mainly utilised in the

palaces of the kings, the town halls and large country houses of the nobility, because the immense number of churches built in the Middle Ages long sufficed for the spiritual needs of the people. We cannot accurately trace the influence of Italy upon France unless due notice is taken of the invasions of the former country by Charles VIII and Francis I, in vindication of their claims to the thrones of Naples and Milan, because their return to France marks the distribution over Europe of Italian artists and workmen, such as Leonardo da Vinci, Benvenuto Cellini, Serlio, Vignola, Rosso Primaticcio, and others who followed in their train.

The Renaissance in England, which, as in Germany, synchronised with the Reformation, was brought about by many historical events, such as the meeting of Henry VIII with the French king on the Field of the Cloth of Gold, and the consequent introduction into England of Italian and French architects. Again, the suppression of monasteries (1536–40) caused the diffusion of vast revenues, which were distributed amongst the courtiers of Henry VIII, and this led to the erection of residences for the new favourites which displaced the obsolete castles of the old nobility, of whom a large proportion had been killed in the Wars of the Roses. A further result was the building and endowment of grammar schools and colleges, which played an important part in the movement, and paved the way for the great literary activity of the Elizabethan era, rendered famous by the writings of Spenser, Shakespeare, Bacon, Burleigh, and Sir Philip Sidney.

The Elizabethan period, when church-building was at a standstill, is notable for the influx of Flemish and German workmen and the immigration of Huguenot craftsmen, due to the Massacre of St. Bartholomew in France in 1572, and is remarkable for its numerous domestic mansions, the design of which was influenced very largely by this immigration. The newly introduced classical details were used with such caution and delayed by such conservatism as we should expect of the English character, and mansions, with characteristic long gallery and broad staircase, often retained features from the previous period, such as the great hall, and large mullioned windows. These mansions are generally found in a perfect setting formed by a beautiful formal garden, indicative of the Englishman's love of country life, and they are designed on generous lines, illustrating the scale of hospitality which obtained in the spacious times of Queen Elizabeth.

The later Renaissance period felt more strongly the classical influence owing to the careful study of Italian examples by Inigo Jones, and to the works of Sir Christopher Wren in the latter half of the seventeenth century.

Owing to the Great Fire of London, when many places of worship were destroyed, numerous churches were erected in the city for the Protestant religion, which gave prominence to preaching, and demanded galleries and congregational planning in the place of the long-drawn processional aisles of the mediæval period.

In North-West Europe the Reformation accompanied, or rather preceded, a fresh building era, but with the exception of the period of Charles V the existence of a number of independent petty states occasionally at war, each having its own government and capital, prevented any such national effort as was possible in France. On the other hand, ecclesiastical, commercial, and municipal buildings tell of the flourishing condition of some of the principal towns of this part of Europe.

In Spain the Renaissance followed the fall of Granada in 1492, and expulsion of the Moors, when the country became consolidated under Ferdinand and Isabella ; but the new style was much influenced by the Moorish craftsmen, who gave a special ornamental character of richness, intricacy, and refinement to the architecture of the country.

Until the nineteenth century, which was the era of revivals of all styles, architecture was generally traditional. These revivals were brought about by numerous causes, among which the facility of travel, the increase of illustrated books, and the break-up of traditional schools of craftsmen were important. Nevertheless, architecture still continues to reflect the thought of the day, the needs and aspirations of the people, and is an index of the social forces at work. This is shown in the erection of numerous types of buildings, such as law courts, town and village halls, cathedrals and churches, universities, colleges and schools, scientific and benevolent institutions, museums, art galleries, public libraries, markets, hospitals, asylums, swimming baths, drill-halls, theatres, cinemas, Masonic halls, office buildings, great shopping stores, railway stations, large motor garages, aerodromes, factories, club-houses, residential flats, and hundreds of thousands of houses erected under the town planning and housing schemes since the two World Wars—all to meet modern requirements. Architecture is hardly likely to develop into a systematised style in the future, because architects, having eaten of the tree of knowledge of all past periods, will continue to be swayed, as regards mere decorative forms, by passing fancies helped by literature and accentuated by sentiment.

In the foregoing I have endeavoured to demonstrate that a study of architecture enables us to interpret the moral, artistic, and religious character of humanity, that a closer insight into the profoundest characteristics of a nation is to be obtained by a study of the buildings erected in different periods, and that the thoughts, habits, and instincts of the times are thus more clearly and more truthfully presented to us than by the writings of an over-imaginative historian.

Architecture then may be regarded as the stage and setting of historical events, and in this aspect it is of the greatest importance, as it helps us to visualise the course and development of human effort. Architecture, in short, reveals much of what written history itself relates.

Part II.—Architecture : Its Place in a General Education

History in stone or the architecture of the past, having thus been outlined, let us look at its place in the present educational system, first considering some reasons why a detailed study of the art has not hitherto been included in educational curricula.

Its absence has doubtless been largely due to its technical nature, and to the misconception formed by many that the lay mind could not embrace the forms and constructive principles of which it is the outcome. There does not appear to be any other valid reason that would account for the educational door having been so long shut upon such an important and entrancing subject. A stronger reason may probably have been the inability to deal with the subject from the educational point of view, because of the absence of readily available illustrations. To expound architecture to the layman without adequate views and plans is like merely reading a play instead of witnessing it upon the stage, and this lack of illustration must obviously have been a great deterrent, but fortunately this difficulty no longer exists.

Notwithstanding that architecture has been entirely omitted from educational codes of the past, there have always been *dilettanti* who have been worshippers at her shrine, and among modern writers it is well to remember that many, like Ruskin, Freeman, and Fergusson, have had no professional education in the art. Many of the world's greatest men and rulers of the past were builders, or at least patrons of architecture, *e.g.*, Rameses the Great, Darius, Xerxes, Pericles, Alexander, Augustus, Hadrian, Trajan, Constantine, Theodoric, Theodosius, William the Conquerer, Charlemagne, William of Wykeham, the Medici, Wolsey, Elizabeth, Francis I, Louis XIV, Philip of Spain, and Napoleon I. Owing, however, to the march of democracy and the wider distribution of wealth, the patronage and protection of great men have been wanting in recent times, and as the people have not been educated up to the value of art in national life, the study of architecture has fallen into a state which is not likely to promote either good building or national interest therein. The art cannot thrive without the special fostering influences necessary for its production.

Architecture is essentially a human art and it is also an affair of material and can only be carried out within the limitations thus imposed on it. A painter may paint fine pictures that find no purchaser ; a sculptor may model statues that remain in his studio ; a musician may compose symphonies that find no orchestra ; but the architect cannot construct cathedrals for which there is no ecclesiastical use, public buildings which a nation does not require, or dwelling-houses which are not to be inhabited. Architecture has no place in most educational schemes because those responsible for them generally belong either to the classical or to the scientific school and naturally think first of their own special subject. Thus a classical man includes history and literature, and omits the practical art which forms the background ; while the science man looks after chemistry, geology, mineralogy, and other sciences, and omits any study of the buildings made by man out of the materials with which science deals.

The fact that music and singing are often included, accounts for the greater general interest taken in music by the public, and justifies its description by Symonds as the truly modern art. The history and literature included in modern education miss much human interest, because architecture—or the petrified history of the past—is scarcely ever mentioned. Surely the work of human hands is worthy of study, since it gives us an insight, not obtainable in other ways, into the thoughts, feelings, and aspirations of the men who produced it.

Architecture and the kindred arts of painting and sculpture, represent not only the thought of each period, which is likewise expressed in its literature, but they exhibit also the work of human hands, the building of all kinds which are the results of brain power or design and hand-power or construction.

The training of architects and practice of architecture in Great Britain are controlled and guided by the Royal Institute of British Architects. Through its Board of Architectural Education it conducts the progressive professional examinations which qualify candidates for corporate membership of the R.I.B.A. and for registration under the Architects Registration Acts, 1931–38. The Board is also responsible for the maintenance of the required standards at the Schools of Architecture whose examinations are recognised as exempting from the R.I.B.A. professional examinations.

It is laudable that architecture has now, on the professional side, a seat within the portals of the Universities, and that Bachelor of Arts degrees in Architecture have been instituted in the Universities of Cambridge, London, Manchester and Sheffield, and a Bachelor of Architecture degree in the Universities of Liverpool, Wales and Durham, whilst the University of Glasgow awards a degree of Bachelor of Science in Architecture.

It is more gratifying that, for the benefit of members of the interested public, courses of lectures on various periods of architectural history have already been provided at various centres through the progressiveness of certain modern educational authorities, of which London University is an example, thus extending tuition of University character on this and other subjects to the people at large; and from the large attendance at these the authorities have fully realised the fact that what they have provided was greatly needed and is much appreciated, particularly in view of the fact that the subject matter of the lectures is often given in relation to the general history of the period.

The inclusion of art in the new scheme of the humanities initiated by the University Extension Board of London University was an important step, for true creative art is the grandest work of which man is capable, and the history of any period is incomplete without it. The whole scheme of work is arranged solely from the point of view of a liberal education, and not only for professional or technical purposes, *i.e.*, to advance its general study, apart from its adoption as a profession. Under this scheme, a Diploma in the History of Art, covering that of architecture, has been established.

All over the country at the present time scientific and strictly technical education, helped by large grants of money from the public purse, is advancing with rapid strides, and schools in business and other centres are being erected in furtherance of the forward policy of national education. This being so, at our great universities the study of the wider aspect of life, ancient and modern, should include all

branches of the culture and art of all ages. These centres of education are essentially the places where we might reasonably expect that the history of the humanities should be welcomed, and that the student should be able to obtain instruction in the principles of the art of past ages. Architecture is much more worthy of inclusion in a general education than several subjects one might mention that have secured recognition.

As regards the technicalities of the subject, it should now be patent to all that these, which are much simpler than in many of the sciences, can be easily learnt by the average student, and that a lecturer, imbued with the absorbing nature of the subject, can invest it with human interest and explain the necessary technical details graphically so as to make it intelligible to the general student.

The inclusion of architectural history in any scheme of liberal education seems to be not only facilitated, but also rendered more necessary for many reasons, a few of which can be briefly enumerated.

Modern facilities for travel have done much to arouse a genuine interest in the architectural works of the past in different countries. The personally conducted educational expeditions which have been popular during late years are also largely responsible for the desire among travellers to know something of the forms of art which are thus brought prominently before them. Photography, and even cinemas and television, have been an important factor in interesting a large section of the community, especially of the travelled and educated public and *dilettanti*, in matters of art and architectural history, and has caused a thirst for a knowledge of the subject which can best and most easily be obtained by attendance at lectures in which it is systematically dealt with. The general spread of education in matters of art has caused a yearning for a knowledge of architectural forms such as is provided by the educational scheme already mentioned.

Further, the use of lantern slides and film strips, the importance of which must not be overlooked, rendering possible the adequate illustration of the various forms and features of each period to large audiences, has given an added interest to such lectures, and has awakened an enthusiasm for the subject which could have been brought about by no other means.

Photographs in conjunction with lantern slides or film strips enable examples of the art-history of any period to be shown and dealt with *seriatim*, because by means of photographs of detail and ornament the subject can be illustrated and the process of evolution and design made clear, so as to be entirely comprehensible to the least imaginative.

We have seen in the general history of European architecture how its various forms resulted from the social, political, and industrial condition of the people, and how this intimate connection influenced contemporary art.

We have also seen why its study has not been included in past schemes of so-called liberal education, and why its inclusion was not easily rendered possible. Let us now consider the probable result of such inclusion, and the benefits to be derived by the general community.

I plead on behalf of every person to whom a liberal education is desirable, not as a means of enabling him to gain a living, but as fitting him to enjoy his daily existence to the utmost extent. Travelled and cultured people are included in this class, and for them each type of architecture must be bound up with the causes—geographical, geological, climatic, religious, social and historical—of which it is the

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result, and its intimate connection with all these must be shown more clearly than is possible in a technical course for young students.

At present many people who wander amongst the beautiful and soulful creations of the past are unable to appreciate either their meaning or their qualities, owing to their ignorance of architecture. To them form has no meaning, and a Greek temple, a Roman amphitheatre, or a Gothic spire fails to recall the conditions which render each a reflection of its own period in history.

The inclusion of architecture therefore in any systematic course of instruction seems essential, and will give to those who study it a general outline of the arts of form, and a clearer perception of the trend of humanity in past ages, which is necessary, to a complete understanding of history. It will also give an additional pleasure in travelling, through awakened interest in the great works of architecture, and because of the knowledge acquired of the place of each work in the evolution of art.

To know something about pictures, to talk with an air of knowledge about the various schools of painting and sculpture, and to show an acquaintance with the galleries in which they are found has long been fashionable ; but has it been realised that with a knowledge of architecture each street is a picture gallery which everyone may enter without so much as the payment of an entrance fee ?

The late Bishop Creighton once said at an architectural gathering that " architecture is the most democratic of the arts, that it goes literally into the market-place, that it is for everybody, and that rich and poor alike may enjoy it." How essential, then, it is for the production of well-designed buildings that the patrons of architecture—the public—should have a desire for good buildings ! Then consider the individual buildings ; have not a great number of them been erected by the general mass of the community in past ages ? Are they not in the highest degree human ; for can we not see the marks of saw and chisel, made maybe hundreds of years ago, but still telling us of the methods of construction, craftsmanship, and design of the time ? Again, our free gallery of buildings varies with the day and time of year ; we may see them in the haze of early dawn, in the full flood of noonday sun, in the dimness of twilight, or in the weirdness of moonlight, while in the change of seasons we get that variety which gives them life. No special lighting is necessary for the works of the architect, which form a setting for the work of sculptor and painter.

The sense of environment, and the effect of the weather, which gives colour and texture to the walls and lichen-covered roofs, add to the enjoyment obtainable from the study of an old cathedral, and intensify the influence of a beautiful building upon all who pass and repass it daily. By environment we mean not only the position of the building on some specially interesting spot, but the environment of the period to which the building belongs, viz., the history of the time and of the people who helped to erect the structure. If we study either architecture or history aright, we must get into the " atmosphere of the period." It may be said with some truth that history has been to architecture what steam has long been to machinery, the grand propelling power ; while on the other hand, architecture has been the printing press of all periods.

Architecture is, indeed, more particularly entitled to the attention of the general student than any other of the fine arts, because it calls into action so many and such varied branches of mechanical labour,

and because, operating thus extensively upon industry, it also promotes national prosperity. Hence the dissemination of a taste for it among the middle as well as the more opulent classes of the State is not only sound national policy, but also important as likely to lead to more direct and more obvious artistic results.

Therefore, in these days of enlightenment, and in the interests of true as against superficial education, is it not expedient to provide for the study of architecture and its connection with history in the curriculum of education ? Is it not the art that shelters us from the elements, and on which we are daily dependent ; the art which gives us " home "; the art which enshrines and illuminates the most sacred of our associations, forming and fashioning the ornamentation of religion, which it aids by the mystery of its light, shade and colour ; the art which has been and is the outcome of conditions intimately bound up with the history of the human race ? Finally, is it not the art which is the mother of all arts and from which sprang painting, sculpture, and all the allied arts and crafts of succeeding ages of development ?

The time spent in the study of such an enthralling subject will not be regretted for every ruin will then tell of the history of other days, and will reveal the character of the men of the period in which it was erected. It will open up the enjoyment of the contemplation of buildings of which the meaning will be appreciated, and enable us to realise more fully the truth of Longfellow's lines :

" . . . Ah, to build, to build !
That is the noblest art of all the arts.
Painting and Sculpture are but images,
Are merely shadows cast by outward things
On stone or canvas, having in themselves
No separate existence. Architecture,
Existing in itself, and not in seeming
A something it is not, surpasses them
As substance shadow."

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